Technology Serving the Future of America's Heritage

NCPTT Notes

U.S. Department of the Interior
National Park Service

A Publication of the National Center for Preservation Technology and Training | Issue 44 | www.ncptt.nps.gov

Engineering for Older and Historic Buildings

Right: Sam Harris instructs NCPTT Summer Institute participants in treatment strategies and interventions at the historic African House on the grounds of Melrose Plantation.

ALSO IN THIS ISSUE:

NCPTT Premiers Summer Institute

2004 Courses Take on Special Issues in the Engineering of Older Buildings

Each year in the United States, 94 cents of every construction dollar is spent on the existing built environment. Annually, more than $3 billion in construction is directly attributed to the availability of federal historic preservation rehabilitation tax credits. Rehabilitation of existing commercial, residential, and public sector buildings exceeds $400 billion per year.

Recognizing the challenges of the existing built environment represents a significant and increasing percentage of work produced by U.S. architectural firms, NCPTT recently introduced training to teach engineering professionals about specific issues involved in engineering for older and historic buildings.

This national training was held July 13-23 and was attended by engineers and related professionals who have structural engineering experience and an interest in the specific engineering issues of historic structures. Participants studied nationally-significant structures at Melrose Plantation, located at the Cane River Creole National Historical Park.

"Many times, builders of historic buildings didn't necessarily follow the same rules of construction we use today," said Donna Isaacs, a student at the University of Florida's M.E. Rinker Sr. School of Building Construction who attended the entire two-week institute. "The information we're learning is helping me rethink how I look

continued on page 6

NCPTT Notes
Issue 44
Summer 2004

NCPTT Executive Director
Kirk A. Cordell

Editor
Jeff Guin

NCPTT Notes is published by the National Park Service's National Center for Preservation Technology and Training.

The purpose of this publication is to convey NCPTT's Mission, which is to advance the use of science and technology in the field of historic preservation including archeology, architecture, landscape architecture and materials conservation. The Center accomplishes its mission through training, education, research, technology transfer and partnerships.

The mail list for NCPTT Notes is subject to request under the Freedom of Information Act. Persons or organizations not wanting to have mail list information disclosed should unsubscribe.

Send comments to NCPTT Notes or submit articles or notices for consideration to ncptt@nps.gov or call 318-356-7444.

Inside NCPTT: Noteworthy Happenings at the Center

2005 NCPTT Call for Proposals Goes Online

NCPTT will make its 2005 PTTGrants Call for Proposals application available online by September 15, 2004. To access the online application, visit www.ncptt.nps.gov or contact NCPTT at 318-356-7444. Proposals must be received by December 1, 2004.

NCPTT's grants program supports innovative projects focusing on preservation technology in historic architecture, historic landscapes, archeology and materials conservation.

Fourth Annual Preservation in Your Community Event Focuses on Preserving Buildings and Outdoor Monuments

On July 28, interns and staff at NCPTT presented their work during the fourth annual Preservation in Your Community event at Lee H. Nelson Hall. The event was titled "An Ounce of Preservation: Preserving Buildings and Monuments in Natchitoches and across the Nation."

Charlie and Beth Mann read an SOS! exhibit panel during NCPTT's Preservation in Your Community Event on July 28.

Interns Eric Broaddus, Seth Fornea, Andy Jacob, Ligy John, and Harriet Swift presented their summer research at NCPTT.

Additionally, the Center debuted the exhibit "Preserving Memory: America's Monumental Legacy." The 25-panel exhibit was created by Save Outdoor Sculpture! to create an awareness of the important cultural role outdoor monuments play in America and the efforts being made to preserve them.

NCPTT and its National Park Service partners hold Preservation in Your Community events each summer to inform the public about local preservation efforts.

Louisiana Preservation Alliance Names NCPTT Partnership "Preservationist of the Year"

NCPTT was named "Preservationist of the Year" at the recent Louisiana Preservation Alliance Conference. The award recognized NCPTT's partnership with the Cane River Creole National Historical Park, the Cane River National Heritage Area, and other preservation organizations for its cooperative effort in advancing preservation in the Cane River area and the city of Natchitoches, Louisiana.

NCPTT Partners with GSA to Evaluate Vitrification as a Treatment for Historic Terrazzo Floors.

NCPTT and GSA are undertaking research on vitrification as a treatment for historic terrazzo floors. The treatment has been proposed for use in federal buildings owned by the GSA. NCPTT will conduct a series of analyses to determine whether or not vitrification has long-term adverse effects on historic terrazzo.

The work is being conducted with funding from GSA through an interagency agreement. Progress on the project includes a continuing literature review, development of experimental design and sampling of historic terrazzo in the Milwaukee Federal Building.

NCPTT Partners with Olmsted Center to Develop Landscape Plan for Lee H. Nelson Hall

In an effort to enhance the native beauty to the landscape at its headquarters in Lee H. Nelson Hall, NCPTT has contracted the prestigious Olmsted Center for Landscape Preservation to develop a landscape plan. The plan is a result of the efforts of Chris Stevens, a landscape architect with the Olmsted Center, who researched NSU library collections and physical plant files for archival photos and descriptions of the campus.

Chris Stevens of the Olmsted Center for Landscape Preservation is making plans to enhance the landscape of Lee H. Nelson Hall.

Stevens has produced a detailed planting plan that incorporates plant and tree species native to the north Louisiana area where Nelson Hall is located. A mound of large leaf magnolias, a paw-paw patch, and a camellia hedge are some of the plantings proposed. The plan also calls for the addition of new shade trees.

New Solutions for 'Old' Problems

Newest PTT Grant Recipients Initiate Important Preservation Projects

Nine locations across the country are currently undertaking cutting-edge preservation technology research as participants in the 2004 PTT Grants program. Secretary of the Interior Gail Norton approved the release of $300,190 for the projects, which are poised to benefit numerous preservation-related fields.

"Over the past decade, NCPTT has helped pioneer many important research projects that apply new technologies to solve preservation problems," Kirk Cordell, NCPTT executive director, said. "Our newest PTT grant awards make it clear that this research continues to be vital to the preservation of our nation's cultural resources."

State governments, universities and non-profit groups are eligible to apply for funding through the preservation technology grants program. Each project is funded for one year with the option to reapply in subsequent years for ongoing research.

Projects funded in 2004 included the following:

1. Water Transport Characteristics of Masonry Restoration Mortars; Rocky Mountain Masonry Institute, Denver, Colorado.
2. Unreinforced Load-Bearing Masonry Structure Assessment by Modeling, Validation, and Testing; Pennsylvania State University, University Park, Pennsylvania.
3. Protocol for Emergency Washing, Drying, and Sterilization of Historically Significant Books; University of Utah Marriott Library, Salt Lake City, Utah
4. Microbial Detoxification of Mercury Contaminated Museum Collections; University of Colorado at Denver, Denver, Colorado.
5. Using the General Land Office Records to Enhance Identification of Cultural Landscapes in North Mississippi; Mississippi State University, Starkville, Mississippi.

Photo by John Brooks, NPS

6. Creating an On-line Library: Electronic Conservation and Distribution of 85 Years of Historic Masonry Articles; The Masonry Society, Boulder, Colorado.
7. Complementary Geophysical Survey Techniques at Old Mobile; Friends of Old Mobile, Inc., Mobile, Alabama.
8. Biofeedback: The Investigation of Historical Human Biological Materials; Institute for Science, Law and Technology, Illinois Institute of Technology, Chicago, Illinois
9. Supercritical Fluid Cleaning of Perishable Organic Artifacts for Non-destructive Radiocarbon Dating; Texas A&M University, College Station, Texas.

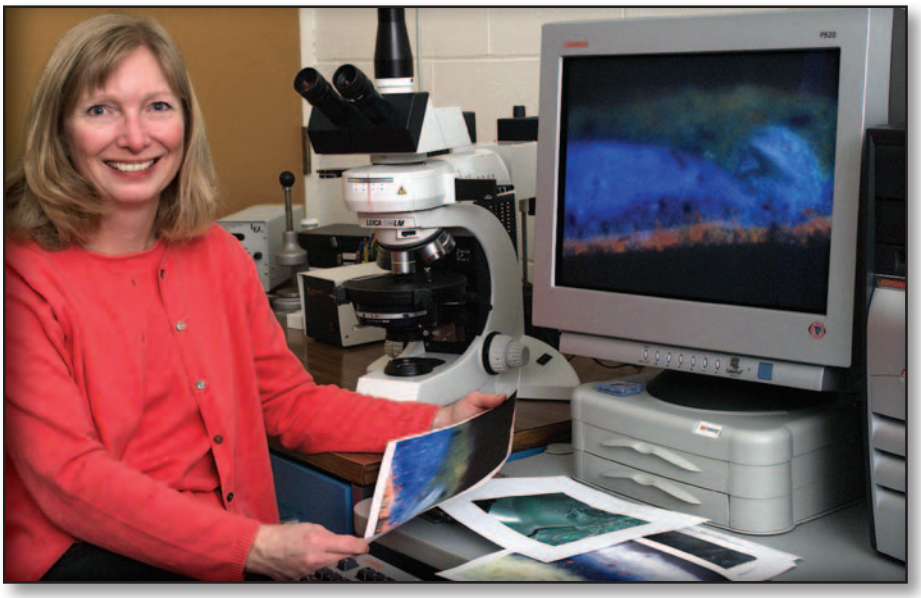
According to Fran Mainella, National Park Service director, the new projects will help promote the values of our national heritage.

"These awards further the mission of NCPTT," Mainella said. "The recipients will undertake projects that promote preservation and conservation skills and technologies for the protection of America's cultural heritage."

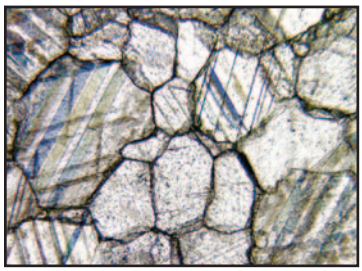
2003 PTTGrant projects made an impact on the field of preservation technology. (Above) Students at Minnesota State University study techniques for studying archeological sites using underground magnetic imagery. (Top) A PTT Grant awarded to Montana Public Broadcasting investigates America's cultural resources underwater. Here, an NPS archeologist draws a sextant at Dry Tortugas National Park.

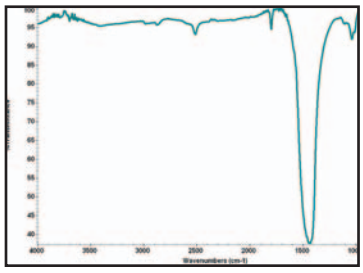
CAMEO Makes Its Debut

NCPTT-funded Website Grows into a Comprehensive Tool for Materials Researchers



Above: Michele Derrick manages CAMEO to ensure the database has a comprehensive collection of images and information for materials researchers.





Above: CAMEO includes images of materials such as calcite as well as accompanying data such as the infrared spectrum for calcite.

Visit CAMEO at www.mfa.org/cameo

Don't let the name fool you. The Conservation and Art Materials Encyclopedia Online (CAMEO) promises to play much more than a small role as a reference tool for preservation professionals.

Funded by a 1998 PTTGrant, the CAMEO electronic database compiles, defines, and disseminates technical information on the distinct collection of terms, materials, and techniques used in the fields of art conservation and historic preservation. According to Michele Derrick of the Museum of Fine Arts (MFA) in Boston, the PTT Grant allowed the database to grow beyond its original programming.

"The database was formerly called the Conservation and Art Materials Dictionary," Derrick said. "While the database was originally conceived as a potential reference book, NCPTT provided the encouragement and financing to develop CAMEO as an interactive database." Additional resources and support from the MFA enabled a draft version of the database to be placed on the internet in November 2000.

CAMEO's breadth of information is what sets it apart from other sites that target specific audiences with highly-detailed, but narrowly-focused information. By cross-referencing and providing contexts for the preservation research included in the database, researchers with a narrow focus can discover a broader view of their subject matter. Derrick says this holistic understanding is important.

"The art conservation and historic preservation fields rely implicitly on knowledge gained from education, experience, colleagues, and reference sources in order to interpret material evidence on artifacts and understand its context within our cultural heritage," she said. "This knowledge base is necessarily broad because artifacts, sites, and treatment methods can include any combination of materials that have been used in the history of mankind."

CAMEO is not the first online database to address the needs of materials preservationists; however, most have either become obsolete or contain one-sentence descriptions. The database's ability to grow also enables it to account for ever more complex technical and analytical processes, as well as new materials and trends in preservation.

CAMEO is being revised with an upgraded software structure and increased content coverage through funding by a 2002 Institute for Museum and Library Services National Leadership Grant. During this two-year grant period, the coverage of CAMEO is being expanded to include additional records, images and hyperlinks to other websites.

Derrick anticipates that by upgrading CAMEO, conservators will no longer need to use multiple sources for basic information on various types of materials. Instead, the database will consolidate the textual and visual information from the different conservation specialties into one centralized compendium. The internet then provides the necessary medium to deliver the merged information freely to preservationists around the world.

I-Sites: A Clear Vision for a Sustainable Preservation Website

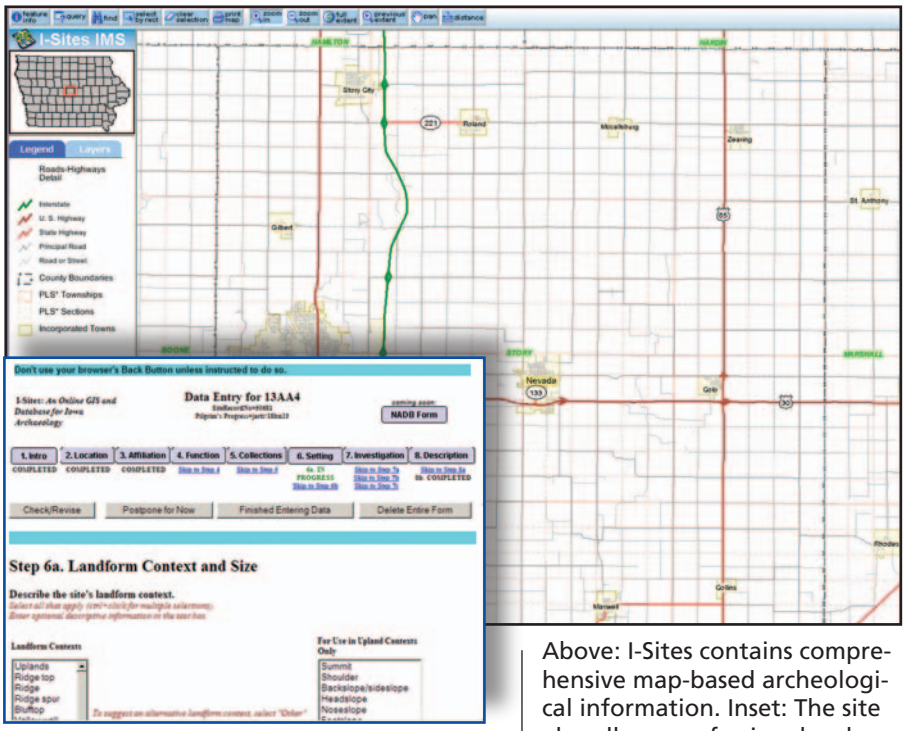
It takes uncommon vision to create a preservation website that remains both current and accurate over the long term. At Iowa State University, the team that created "I-Sites," a PTT Grant, is taking a 20/20 view of this dilemma by creating a website that allows preservation professionals in Iowa to share the latest research.

"I-Sites is an example of a web application that has the potential to draw professional archeologists and agencies together into a body of researchers and planners that are well-informed and closely-connected, despite the miles that separate us," Joe Artz, I-Sites project team leader said. "An archeologist registered to use I-Sites has 24-7 access, via personal computer and the web, to information that was previously available only by traveling to, or requesting copies from, Office of the State Archaeologist in Iowa City."

I-Sites contributes to information management in historic preservation in Iowa by resolving the all-too-often overlooked need to keep preservation-related databases current with existing and ever-growing knowledge. According to Artz, preparation was the key to ensuring the site would be comprehensive and sustainable. His group spent two years digitizing archeological site locations in Iowa into a GIS even while adding some 1,800 new records that arrived during that period.

One of the ways the team ensured sustainability is by building the site on the foundation of a relational database. Additionally, the website empowers users to record new archeological data, giving those who most urgently need the data an active role in keeping it current.

I-Sites also makes use of cutting-edge Internet Map Server technology to deliver much of the functionality of GIS-driven maps to a broader spectrum of individuals, firms, and agencies that need to know about where sites are located, but who may lack GIS software or training. UI-OSA's partners at the University of Missouri and Iowa State University participated in creating I-Sites twin map servers—a public site and a site for professional users.



Above: I-Sites contains comprehensive map-based archeological information. Inset: The site also allows professional archeologists to perform live updates while in the field.

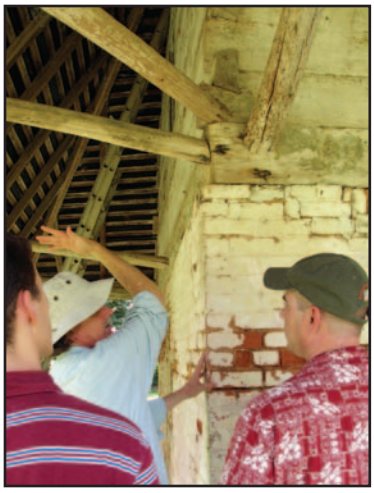
Even with the complex technology involved in building the project's infrastructure, its goal was simplicity for contributors and end users. I-Sites was conceived as a web-based application that would help the project team keep databases and GIS information current by enabling users to enter new data and make simple queries of existing data, freeing the small staff's limited resources to concentrate on improving data quality and responding to more complex query requests.

The I-Sites project team chose to submit a grant to NCPTT because, Artz says, "It seemed to me that NCPTT was looking to fund exactly the kind of project that my organization needed to do as the next step in taking the Iowa Site File into the 21st century."

In the future, the project team hopes to broaden the information available online included in the I-Sites databases. Artz says plans include adding aerial photography, in addition to the present base maps of USGS quads, to the internet map server. He also anticipates adding a database and GIS of archeological survey areas.

Above: Joe Artz, I-Sites project team leader (at left), demonstrates how I-Sites works during an exhibition at the Iowa State Fair.

Visit I-Sites at
http://www.uiowa.edu/~osa/gisatosa/isites.htm



Above and Right: Participants explore African House to discover more about the building's structure in preparation for group presentations later in the course.

Above: Michael Henry explains the use of bousillage building materials used at Yucca House

continued from front page

at these buildings and giving me a firm foundation to address these issues in my future career."

The Summer Institute consisted of four two-day courses that could be taken individually or as a full two-week introduction to preservation engineering.

Nationally-Recognized Experts

Four nationally-recognized experts conducted the training. David C. Fischetti, PE, president of DCF Engineering in North Carolina, led training on Building Pathology. Melvyn Green, PE, of Melvyn Green and Associates in California, instructed a course on Materials and Older Buildings; Michael C. Henry, PE, AIA, founding partner of Watson and Henry Associates in New Jersey, instructed Investigations and Diagnostics Methodology. Finally, Samuel Y. Harris, PE, FAIA, JD, who teaches historic preservation and professional practice at the University of Pennsylvania, led training on Treatment Strategies and Interventions.

Harris' Treatment Strategy and Interventions course concluded with a group presentation of proposed stabilization strategies for Melrose Plantation's African House. Scott Falvey, an architect from Knoxville, Tennessee, attended the class and says it provided him tools needed to enhance his professional development

"The course has taught me how to set up matrices of different solutions which will help communicate all the options for intervention to my clients," he said. "Working in group settings has been very effective for teaching the materials for the course. Having access to the case studies along with the teaching style has made the course one of the best continuing education unit courses I have participated in."

Professional development consideration for the training was made available through the American Institute of Architects Historic Resources Committee and the American Society of Civil Engineers Architectural Engineering Institute.

Training Emerges from 2003 APT Effort

The Summer Institute grew out of NCPTT's "Engineering for Older Buildings, including Heritage Buildings" course offered during the 2003 Association for Preservation Technology International Conference in Portland, Maine.

At the Portland conference, materials and pathologies were studied, addressing vulnerability of materials, materials perfor-

continued on next page

Left: Mel Green discusses an architectural problem with one of the breakout teams.

Lower Left: David Fischetti discusses the challenges moisture is presenting to the floor structure at Yucca House.

Lower Right: Participants in the workshop present their proposed solution to strengthen weakened structural elements.

mance, building pathology and processes of deterioration. Working from the engineer's standpoint, the courses introduced the specific issues, technical challenges and illustrative solutions that are encountered in older buildings.

More than 30 professionals in the field attended the training, which was taught by both Henry and Harris. According to Harris, the training was useful in tackling some of the field's most persistent, hard-to-address issues.

"Two things emerged during the training session which confirmed in my mind the validity of our hypothesis that preservation engineering has definition and the definition is not well understood," he said.

"In an exercise involving the calculation of an engineering value, the younger engineers tended to retreat to the over-conservative safety of published values and non-engineers were overly willing to defer to such youthful insecurity. One of the important points of preservation engineering is the development of confidence in the presence of uncertainty."

NCPTT plans to continue its training for architects and engineers at next year's Summer Institute. While the 2004 program focused on *Engineering for Older and Historic Buildings*, future offerings may include courses in Materials Research, Archeology and Historic Landscapes programs.

Capitol Training

Second Seminar and Workshop held in Washington D.C., Congressional Cemetery

Above: Memorialist Glen Whitener tests stone cleaning agents on an artifact during a session on cleaning cemetery monuments.

Above: Group activities enhanced the learning experience by allowing participants to work together to solve specific problems at Congressional Cemetery.

NCPTT recently followed up its highly successful training held last year on the conservation of cemetery monuments with a new seminar and workshop focused on the conservation challenges of the mid-Atlantic region.

Participants from across the nation participated in the events held in Washington, D.C. The participants represented a wide array of individuals involved in cemetery preservation, including cemetery association members, state historic preservation officers, national and state park employees, doctoral students conducting research in cemeteries, cemetery caretakers, monument builders and family cemetery owners.

Several nationally-recognized experts worked together on the development and instruction for the seminar and workshop. The instructors included Norman Weiss, Irving Slavid, and Karl Munson from Monument Conservation Collaborative of Colebrook, Connecticut; Fran Gale from PROSOCO of Lawrence, Kansas; Shelley Sass from New York University; Dennis Montagna, Judy Bischoff, and Lucy Lawliss from the National Park Service; Patty Miller from Conservation Solutions of Washington, D.C.; Glen Boornazian, Integrated Conservation Contracting; and Mary Striegel and ElizaBeth Bede Guin from NCPTT in Natchitoches, Louisiana.

"A Perfect Setting"

The seminar and workshop series stemmed from one of NCPTT's research priorities: meeting the preservation needs of houses of worship and cemeteries. Based on demand, training events will continue to be organized for other regions in the United States.

The one-day seminar was held on May 4 at the historic Charles Sumner School in Washington, D.C. It provided a broad overview of issues facing those responsible for the conservation of cemetery monuments.

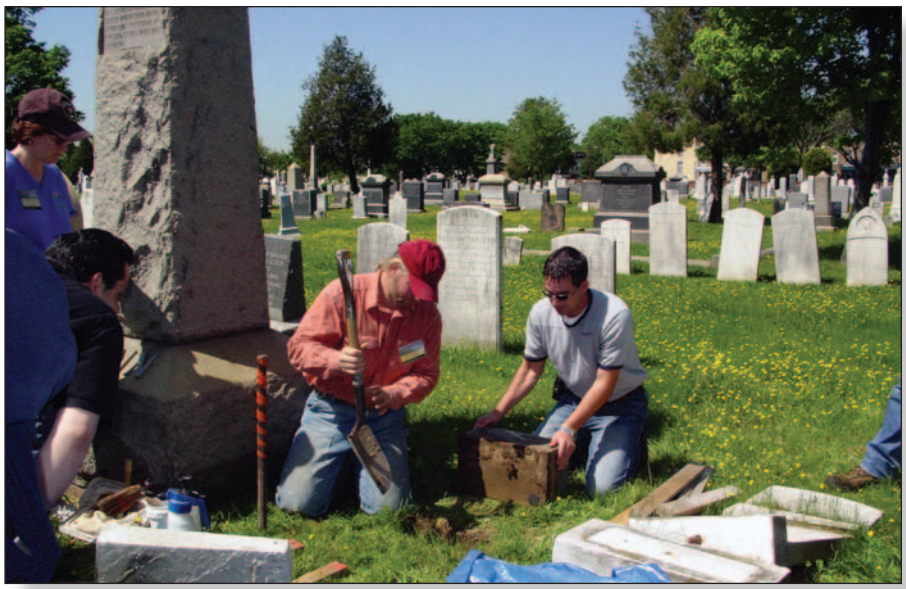
For participants interested in hands-on training in cemetery monument conservation, a two-day workshop followed on May 5-6 at the historic Congressional Cemetery in Washington D.C. Twenty-six participants from around the country were selected from a waiting list for the workshop based on their level of experience. They represented a wide range of cemetery preservation professions from local, city, state, tribal and federal offices responsible for cemetery conservation to monument builders, cemetery associations, private industry, universities and private cultural resource offices. Five professional monument builders were among those selected.

Founded in 1807 by private citizens, Congressional Cemetery got its name from its popularity as the unnofficial resting place for members of Congress. Congress erected a monument designed by Benjamin Latrobe, architect of the Capitol, over the graves of each of its members.

For those Members who died in office and were buried elsewhere, the Congress erected cenotaphs, or "empty tombs," of the same Latrobe design to commemorate their service.

"The cemetery was a perfect setting for this program," said Glen Whitener, a Certified Memorialist who has participated in

continued on next page



Above: Professional stonemason Karl Munson prepares to reset a grave marker with the help of workshop participant Robert Whitener.

Left: NCPTT Executive Director Kirk Cordell and Clayton Hall, an aide to Congressman Jim McCrery (R-Louisiana), observe participant Lisa Harrington preparing an adhesive repair to a tombstone.

Far Left: Participants put instruction into action by performing supervised fills and patches on grave markers in Congressional Cemetery.

both the Southern and Mid-Atlantic training courses. "Nearly every type of stone and restoration problem exists there. The cemetery needs lots of work. The group incorporated all types of professions, including conservators working in government and private practice."

Linda Donavan Harper, chairwoman of the Association for the Preservation of Historic Congressional Cemetery, worked with NCPTT to coordinate activities for the workshop, along with Bill Fecke, cemetery manager.

The round-robin workshop included hands-on condition assessment and conservation treatments. The conservation treatments encompassed cleaning tests using water, hand-scrubbing with soft-bristle brushes, chemical methods and low-pressure washing (less than 300 psi).

Other hands-on treatments included the removal of failed repairs, resetting of a marker into its original base, consolidation of markers, adhesion of a marker with multiple breaks, the installation of fills, and curing/finishing techniques such as acid-washing fills.

A session on vault restoration was a new addition to the Mid-Atlantic workshop as the Congressional Cemetery features several family vaults.

Participants also put management lessons learned in the seminar to practical use. In one exercise, groups were given a budget and told to devise an effective plan to conserve the Congressional Cemetery.

Helping Hands

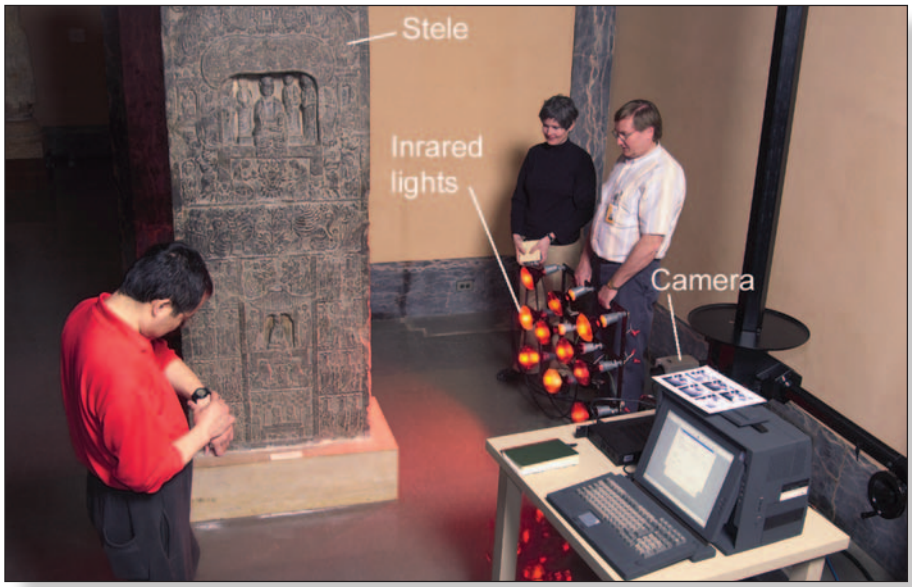
Workshop discussions covered numerous topics, including the use of other chemical treatments such as water-repellents, consolidants and anti-graffiti coatings, the use of patching and grouting mixtures, the stabilization of foundations, the casting of new footings and the resetting of markers.

The Congressional Cemetery benefited physically from the workshop as participants reset four markers. They also pinned and reattached a marker and used adhesion repair to reassemble another marker.

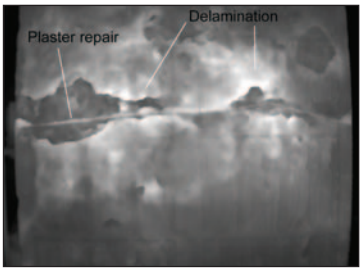
Patching, filling and cleaning was performed on a number of markers. Participants also performed consolidation on numerous fragments around the cemetery.

Reading Between the Lines

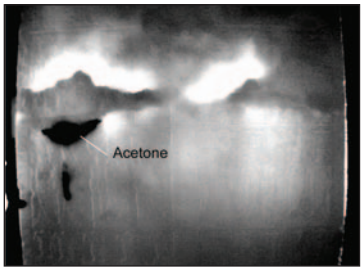
PTT Grants Study Takes the Temperature of a Deteriorating Chinese Stele



Above: Nelson-Atkins scientists monitor an infrared thermography test designed to detect structural properties of the stone.



Above: An infrared thermogram spotlights the stele's plaster repair and delamination.



Above: After only two minutes, acetone begins to migrate into the stone.

The Nelson-Atkins Museum of Art in Kansas City, Missouri, is turning up the heat on research, monitoring artifacts that are threatened by weathering and environmental wear. The museum has just completed a PTTGrant project with the assistance of Wayne State University in Detroit, using thermal imaging to document voids and delamination in a Chinese stele dating to the Northern Wei Dynasty in the sixth century.

Now located at the Nelson-Atkins Museum, the stele is a dark gray limestone carved in low relief. Because of the layered nature of limestone, the object is rapidly delaminating (losing layers) of its surface, endangering the shallow carving. According to Kathleen Garland, object conservator for the museum, a reliable method of tracking the effects of consolidation was needed to prevent further damage.

"The block of limestone has a horizontal cut presumably made at the time that the sculpture was removed from its original location in China" Garland said. "Large amounts of delamination have occurred in the area of this cut."

In spring 2000, John Twilley of Art Conservation Science, and Jerry Podany, head of Antiquities Conservation at the J.P. Getty Museum (both consultants on the possible treatment of the stone) , suggested that infrared thermography might be a way to map the delaminating areas and monitor future damage.

The experiment involved a bank of 10 heat lamps set up to examine the stele, heating the surface of the limestone to body temperature for one minute prior to imaging. An infrared camera was used to image the stele to the depth of one centimeter.

The resulting images, called thermograms, clearly displayed defects as brighter than the surrounding area. The thermograms also revealed areas of delamination below the surface that were not detectable by gentle tapping, which is the traditional method for locating the voids. Rather than immediately applying a consolidant, the team performed a speculative treatment using a non-harmful acetone that would act similarly to a consolidant in real time.

"Since infrared thermography detects the voids below the surface by comparing thermal properties of air in the void, which are lower than the thermal properties of the limestone, we hypothesized that we would be able to detect when a void was filled," Garland said. "A syringe of acetone was injected into a delaminating area just after the stone had been warmed with the infrared light for 10 minutes."

The group selected acetone because it would not affect the surface of the artwork, and it is a good solvent for the consolidant, Paraloid B-72. As predicted, the team was able to watch the migration of the solvent in the delaminating area in real time.

Later, the team injected diluted solutions of B-72 and acetone into the void and successfully monitored the migration of the consolidant. Garland says the technique developed at Nelson-Atkins has promise as a safe methodology for conservators considering consolidation on fragile objects.

"To our knowledge, no other technique allows the conservator to watch the penetration of a consolidant below the surface in real time, and thus monitor the progress of the treatment," she said.

Above: Teachers in Abbeville conduct condition surveys of grave markers to assess measurements, stone types, marker types, wear, and inscriptions.

Grave Lessons

Popular Cemetery-themed Workshops Incorporate Multiple Subjects

Cemeteries are valuable tools for learning lessons about an area's history, but can they be used to teach lessons about culture, language and even math? Teachers who attended the Heritage Education – Louisiana workshops this summer learned how to incorporate cemetery studies into every area of the curriculum while creating a fun learning environment for students.

The 2004 workshops were among the most successful in the program's history, with waiting lists for some locations. Sheila Richmond, Heritage Education — Louisiana program manager, believes cemeteries hold strong interest for teachers because of their strong cross-curricula appeal.

"Beyond their obvious historical impact, cemeteries can teach lessons about science, for example, by studying the composition of materials in the gravemarkers, and local weather patterns by observing the wear of the markers," Richmond said. "Math skills are used for the date patterns and ages. Even English is used when it comes to studying epitaphs and other markings."

Teachers learned how to create cemetery-themed lessons that meet state education standards and benchmarks, including Louisiana's stringent LEAP standardized test. The standards-based approach makes the program's workshops useful in the classroom, and not just a fun add-on.

Staff from Northwestern State University of Louisiana's College of Education aided in the development and delivery of the workshops, ensuring development hours for teachers. The first workshop was held in Natchitoches July 6. Other workshops were held in Ruston, Abbeville and Metairie.

"The workshop made me realize what cemeteries tell us about the community in which we live," Denise Clark, a teacher participating in the Abbeville workshop, said. "I will take these ideas into the classroom so my students can enhance their understanding of our hometown."

In addition to its workshops, Heritage Education — Louisiana has awarded more than $200,000 in Mini Grants to teachers for the development of innovative heritage education lessons and activities.

Above: A teacher in Natchitoches uses a digital camera to photodocument markers in American Cemetery for analysis during group sessions.

Above: Kim McAlister (right), a Northwestern State University College of Education instructor, supervises teachers Jerry Martin and Henry Herford as they plot weathering trends on grave markers found in Greenwood Cemetery in Ruston, Louisiana.

National Park Service
U.S. Department of the Interior

National Center for Preservation Technology and Training
645 College Avenue
Natchitoches, Louisiana, 71457

Official Business
Penalty for Private Use, $300

First Class Mail
Postage and Fees
PAID
National Park Service
Permit No. G-83

United States Department of the Interior

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to tribes.

National Park Service

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education and inspiration of this and future generations. The Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

NCPTT

NCPTT promotes the preservation of prehistoric and historic resources in the United States through applied research and professional training. NCPTT is located on the campus of Northwestern State University in Natchitoches, Louisiana.